

## GENERAL NOTES

1. ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REVISION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND THE UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION AS SPONSORED AND DISTRIBUTED BY THE MARICOPA ASSOCIATION OF GOVERNMENTS (M.A.G.), AND AS ADOPTED BY THE CITY OF SIERRA VISTA'S DEVELOPMENT CODE.
2. ALL PERMITS FROM APPLICABLE GOVERNMENT AGENCIES NECESSARY FOR CONSTRUCTION SHALL BE ACQUIRED PRIOR TO START OF CONSTRUCTION.
3. ALL REQUIRED AND APPLICABLE TRAFFIC CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR AND SUBJECT TO REVIEW BY THE CITY AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
4. CALL BLUESTAKE AT 1-800-782-5348 AND ANY NON-PARTICIPATING UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO BEGINNING ANY WORK FOR FIELD LOCATION OF ALL EXISTING UTILITIES WITHIN PROPOSED CONSTRUCTION AREA.
5. ALL TRENCHING SHALL BE IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATION 29, CFR PART 1926, SUB-PART P, "EXCAVATIONS AND TRENCHES."
6. ALL PUBLIC WORKS IMPROVEMENTS CONSTRUCTED IN THE PUBLIC RIGHT-OF-WAY SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS. CONSTRUCTION SHALL NOT BE COMMENCED UNTIL A RIGHT-OF-WAY PERMIT HAS BEEN ISSUED FOR SUCH CONSTRUCTION. IF WORK HAS BEEN DISCONTINUED FOR ANY REASON, IT SHALL NOT BE RESUMED UNTIL APPROVAL HAS BEEN OBTAINED FROM THE DEPARTMENT OF PUBLIC WORKS.
7. TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
8. THE DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED THREE DAYS PRIOR TO BEGINNING ANY WORK.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING A PERSON WHO IS AUTHORIZED AND CERTIFIED UNDER TITLE 32-142 OF THE ARIZONA REVISED STATUTES TO PERFORM MATERIALS TESTING AND CONDUCT THE TESTING OF ALL MATERIALS USED IN THE CONSTRUCTION OF PUBLIC WORKS IMPROVEMENTS.
10. THE RESULTS OF ALL TESTS SHALL BE PROVIDED TO THE DEPARTMENT OF PUBLIC WORKS PRIOR TO THE FINAL INSPECTIONS AND DURING THE CONSTRUCTION PHASE OF ALL PUBLIC WORKS IMPROVEMENTS.
11. THE CONTRACTOR SHALL GUARANTEE ALL WORK TO THE DEVELOPER AND THE CITY OF SIERRA VISTA AGAINST DEFECTIVE WORKMANSHIP OR MATERIALS FOR A PERIOD OF TWO YEARS FROM THE DATE OF ITS FINAL ACCEPTANCE BY THE MAYOR AND CITY COUNCIL.

12. ALL EXISTING PROPERTY IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED TO THEIR ORIGINAL CONDITION.
13. UPON COMPLETION OF CONSTRUCTION, AS-BUILT DRAWINGS SHALL BE CERTIFIED BY THE DEVELOPER'S ENGINEER PER CITY CODE SECTION 151.08.002.G.1, AND SUBMITTED TO THE DEPARTMENT OF PUBLIC WORKS IN PDF FORMAT FOR APPROVAL. NO FINAL ACCEPTANCE WILL BE ISSUED UNTIL AS-BUILT PLANS HAVE BEEN SUBMITTED AND ACCEPTED BY THE DEPARTMENT OF PUBLIC WORKS.
14. ALL CONCRETE SHALL BE CLASS 'A' (3000 PSI) PER MAG SECTION 725.
15. AN APPROVED SET OF PLANS SHALL BE MAINTAINED ON THE JOB SITE AT ALL TIMES WORK IS IN PROGRESS. DEVIATION FROM THE PLANS WILL NOT BE ALLOWED WITHOUT AN APPROVED PLAN REVISION.
16. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND COORDINATE SITE CONDITIONS WITH THE DRAWINGS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES AND OMISSIONS SHALL BE RESOLVED WITH THE PROJECT ENGINEER. DO NOT USE SCALED DIMENSIONS.
17. A COPY OF THE CURRENT STORM WATER POLLUTION PREVENTION PLAN AND NOTICE OF INTENT SHALL BE AVAILABLE IN ACCORDANCE WITH AZPDES CONSTRUCTION GENERAL PERMIT.
18. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS AND TAKE WHATEVER MEASURES THAT ARE NECESSARY TO INSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.

#### **SEWER AND WATER NOTES**

1. OWNER SHALL OBTAIN A "CITY OF SIERRA VISTA CERTIFICATE OF APPROVAL TO CONSTRUCT WATER FACILITIES" AND AN "ADEQ CONSTRUCTION AUTHORIZATION FOR A SEWAGE COLLECTION SYSTEM TYPE 4.01 GENERAL PERMIT" PRIOR TO CONSTRUCTION OF WATER OR SEWER LINES.
2. ALL SEWER CONSTRUCTION AND MATERIALS SHALL BE DONE IN ACCORDANCE WITH ARIZONA ADMINISTRATIVE CODE, R18-9-E301; MAG STANDARD SPECIFICATION SECTION 615; AND APPLICABLE MAG OR CITY OF SIERRA VISTA STANDARD DETAILS.
3. ALL WATER CONSTRUCTION AND MATERIALS SHALL BE DONE IN ACCORDANCE WITH ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING BULLETIN NO. 10, "GUIDELINES FOR THE CONSTRUCTION OF WATER SYSTEMS".
4. COVER EACH SEWER LINE WITH AT LEAST 3 FEET OF EARTH COVER MEETING THE REQUIREMENTS OF ARIZONA ADMINISTRATIVE CODE, R18-9-E301-4.01 (D)(2)(h).
5. OPERATION OF WATERLINES SHALL NOT BEGIN UNTIL A "CITY OF SIERRA VISTA APPROVAL OF CONSTRUCTION" IS ISSUED IN ACCORDANCE WITH R18-4-221.

6. ALL MATERIALS OR PRODUCTS THAT COME INTO CONTACT WITH THE DRINKING WATER SHALL CONFORM TO NATIONAL SANITATION FOUNDATION STANDARD 61, AMENDED AS OF OCTOBER 1988.
7. A WATER MAIN SHALL NOT BE PLACED:
  - A. WITHIN SIX FEET, HORIZONTAL DISTANCE, AND BELOW TWO FEET, VERTICAL DISTANCE, ABOVE THE TOP OF A SEWER MAIN UNLESS EXTRA PROTECTION IS PROVIDED. EXTRA PROTECTION SHALL CONSIST OF CONSTRUCTING THE SEWER MAIN WITH MECHANICAL JOINT DUCTILE IRON PIPE OR WITH SLIP-JOINT DUCTILE IRON PIPE IF JOINT RESTRAINT IS PROVIDED. ALTERNATE EXTRA PROTECTION SHALL CONSIST OF ENCASING BOTH THE WATER AND SEWER MAINS IN AT LEAST SIX INCHES OF CONCRETE FOR AT LEAST TEN FEET BEYOND THE AREA COVERED BY THIS SUBPARAGRAPH.
  - B. WITHIN TWO FEET HORIZONTALLY AND TWO FEET BELOW THE SEWER MAIN.
8. NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF A SEWER MANHOLE. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATER MAINS AND MANHOLES SHALL BE SIX FEET.
9. AIR RELEASE VALVES, VACUUM RELEASE VALVES, FIRE HYDRANTS, OR OTHER SUITABLE MEANS OF AIR CONTROL SHALL BE INSTALLED AT HIGH POINTS IN A WATER LINE OR WHERE A LONG LINE CHANGES SLOPE.
10. FIRE HYDRANTS SHALL BE PAINTED CHROME YELLOW.
11. BEDDING AND BACKFILL SHALL BE PER M.A.G. SECTION 601.4.4 AS MODIFIED BY THE SIERRA VISTA DEVELOPMENT CODE, SECTION 151.08.011 AND CITY OF SIERRA VISTA STANDARD DETAILS SV200-3 AND SV200-4.
12. BACKFLOW PREVENTION VALVES WITH DUAL CLEAN OUTS SHALL BE INSTALLED AT ALL LATERAL SERVICES.
13. ALL HOME CONNECTION SEWER LINES ARE PRIVATE AND SHALL BE DESIGNED TO MEET THE REQUIREMENTS OF THE INTERNATIONAL PLUMBING CODE. APPENDIX "E", LATEST ADDITION.
14. ALL WATER LINES SHALL BE DISINFECTED IN ACCORDANCE WITH ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING BULLETIN NO. 8, "DISINFECT ION OF WATER SYSTEMS."
15. LEAKAGE TESTING IS REQUIRED FOR 100% OF THE MANHOLES. THE PROCEDURE MUST BE IN ACCORDANCE WITH AAC R18-9-E301(D)(3)(e) AND ASTM C1244-02e1 (2002).
16. PERFORM A UNIFORM SLOPE TEST OF THE TOTAL LENGTH OF 100% OF SEWER LINES IN ACCORDANCE WITH AAC R18-9-E301(D)(2)(k) (VIDEO CAMERA INSPECTION)
17. LOW PRESSURE AIR TESTING OF EACH SEWER LINE SHALL BE PERFORMED IN ACCORDANCE WITH AAC R18-9-E301(D)(2)(j) (USE ASTM -F 1417-92 (1998)). MAG

STANDARD SPECIFICATION SECTION 615.11(A) DOES NOT APPLY.

18. PERFORM A DEFLECTION TEST OF THE TOTAL LENGTH OF 100% OF SEWER LINES IN ACCORDANCE WITH M.A.G. STANDARD SPECIFICATION 611.3(C) AND R18-9-E301(D)(2)(i) . TEST FOR DEFLECTION BY PULLING A MANDREL THROUGH THE PIPE THAT HAS AN OVERALL DIAMETER 5% LESS THAN THE DIAMETER OF THE PIPE. IF REQUIRED, THE ENGINEER MAY REQUEST A TEST WITH A MANDREL THAT IS 7-1/2% SMALLER THAN THE PIPE DIAMETER BEFORE THE END OF THE WARRANTY PERIOD.
19. DURING CONSTRUCTION, ALL SEWER LINES SHALL BE PLUGGED TO PREVENT INFLOW OF MUD, DIRT, OR RAIN WATER INTO THE EXISTING OR NEW SEWER SYSTEM. NEW LINES UNDER CONSTRUCTION SHALL BE PLUGGED AT THE DOWNSTREAM MANHOLE AND THE UPSTREAM END OF THE PIPE. PLUGS MAY ONLY BE REMOVED DURING ACTIVE CONSTRUCTION. PLUGS LEFT IN PLACE DURING NON-WORK HOURS SHALL BE TIED TO THE MANHOLE STEPS TO PREVENT PLUGS FROM WASHING INTO PIPE. IN NO CASE SHALL A PIPE UNDER CONSTRUCTION BE LEFT UNPLUGGED DURING NON-WORK HOURS. ALL PLUGS USED SHALL BE SPECIFICALLY DESIGNED FOR PLUGGING SEWER LINES. PLUGS SHALL FORM A WATERTIGHT SEAL. THE PLUG SHALL BE SEATED FIRMLY INTO THE PIPE USING AIR PRESSURE OR A MECHANICAL-TYPE SYSTEM. PLYWOOD, BRICKS, TAPE, OR OTHER PLUGS DEEMED UNSUITABLE BY CITY INSPECTORS WILL NOT BE ALLOWED. THE CONTRACTOR WILL REMOVE AND REPLACE PLUGS AS NEEDED FOR CONSTRUCTION AND INSPECTION PURPOSES. PLUGS SHALL REMAIN IN PLACE UNTIL ALL INSPECTIONS HAVE BEEN COMPLETED AND THE SEWER APPROVED BY CITY INSPECTORS.
20. ACCESS TO LIVE SEWER LINES, MANHOLES AND CLEANOUTS MUST BE MAINTAINED FOR MAINTENANCE AT ALL TIMES DURING CONSTRUCTION.
21. ADDING A NEW MANHOLE TO AN EXISTING LINE: A CAST-IN-PLACE CONCRETE BASE AS PER M.A.G. SECTION 725 (CLASS A CONCRETE) SHALL BE POURED UP TO THE CENTERLINE OF THE EXISTING SEWER. AFTER CONCRETE HAS CURED, THE BOTTOM MANHOLE BARREL SECTION IS SET IN-PLACE AND PROPERLY FASTENED AND SEALED; THEN, AT THE NEAREST UPSTREAM MANHOLE, BLOCK FLOW TEMPORARILY. REMOVE THE REQUIRED PORTION OF PIPE INSIDE OF THE NEW MANHOLE AND RESTORE SERVICE WHILE CONSTRUCTION CONTINUES.
22. MANHOLE COVERS ARE TO BE IN ACCORDANCE WITH MAG STANDARD DETAILS 423-1 AND 423-2. COVER TO BE AT LEAST 24 INCHES IN DIAMETER WHEN INSTALLED ON A 48-INCH MANHOLE OR AT LEAST 30 INCHES IN DIAMETER WHEN INSTALLED ON A 60-INCH MANHOLE. COVER TO BE TRAFFIC RATED FOR H-20 LOADING. LETTERING ON MANHOLE COVER SHALL BE "SANITARY SEWER" IN ACCORDANCE WITH MAG STANDARD DETAIL 423-1 AND 423-2.
23. WATERTIGHT MANHOLE COVERS ARE TO BE IN ACCORDANCE WITH M.A.G. STANDARD DETAILS 424-1 AND 424-1 AND SHALL MEET THE REQUIREMENTS OF THE PREVIOUS NOTE.
24. ANY MANHOLES THAT ARE LOCATED IN AREAS THAT ARE TEMPORARILY UNPAVED SHALL BE RAISED TO AT LEAST ONE FOOT ABOVE THE HIGHEST ADJACENT GRADE ANTICIPATED. ALL MANHOLE BARRELS OR ADJUSTMENT RINGS USED TO RAISE THE MANHOLE SHALL BE SEALED WITH MASTIC OR GROUT (AS SPECIFIED) AS IF THE INSTALLATION WERE TO BE PERMANENT. MANHOLES

ARE TO BE LOWERED ONLY IN ANTICIPATION OF PAVING.

25. ANY MANHOLES THAT ARE LOCATED IN AREAS THAT WILL NOT BE PAVED SHALL BE RAISED TO AT LEAST ONE FOOT ABOVE THE HIGHEST ADJACENT GRADE. A CONCRETE COLLAR SHALL BE PLACED AROUND THE EXPOSED PORTIONS OF THE MANHOLE BARREL. THICKNESS OF THE CONCRETE COLLAR TO BE AT LEAST ONE FOOT (MEASURED PERPENDICULAR TO THE BARREL).
26. EXISTING BRICK MANHOLES ARE TO BE COMPLETELY REPLACED WITH CONCRETE MANHOLES. NO NEW CONNECTION SHALL BE MADE TO AN EXISTING BRICK MANHOLE. EXISTING BRICK MANHOLES SHALL NOT BE ADJUSTED TO A NEW FINISH GRADE. ANY EXISTING BRICK MANHOLES THAT NEED TO BE ADJUSTED TO GRADE SHALL BE COMPLETELY REPLACED.
27. CITY OF SIERRA VISTA SEWER MANHOLES ARE REQUIRED TO HAVE STEPS. USE CITY OF SIERRA VISTA MANHOLE DETAILS FOR SEWER CONSTRUCTION.
28. MANHOLES SHALL BE CONSTRUCTED SO THAT THE DISTANCE BETWEEN THE TOP STEP AND THE RIM IS NO MORE THAN 24 INCHES.
29. IF SITE SPECIFIC LIMITATIONS PREVENT 3 FEET OF EARTH COVER OVER A SEWER MAINLINE, PROVIDE THE MAXIMUM COVER ATTAINABLE; CONSTRUCT THE SEWER LINE OF DUCTILE IRON PIPE OR OTHER DESIGN OF EQUIVALENT OR GREATER TENSILE AND COMPRESSIVE STRENGTH; AND NOTE CHANGE ON CONSTRUCTION PLANS.

#### **ROADWAY AND STORM DRAIN NOTES**

1. PAVEMENT MIX DESIGN MUST BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS OR BE ON FILE WITH SAID DEPARTMENT.
2. SAW CUT, TACK, AND JOIN FOR ALL STREET CUTS. SPADE CUT NOT ACCEPTABLE.
3. PAVEMENT REPLACEMENT WITH HOT MIX AC AS PER M.A.G. DETAIL NO. 200, "T"-TOP, AND CITY OF SIERRA VISTA STANDARD DETAILS SV200-3 AND SV200-4.
4. ALL FILLED AND COMPACTED TRENCHES IN EXISTING STREETS SHALL BE PATCHED WITH ASPHALT WITHIN AT LEAST 48 HOURS. IF RAIN IS IMMINENT, THE TRENCH SHALL BE PAVED IMMEDIATELY OR OTHER MEASURES TAKEN TO PREVENT RAINWATER FROM SATURATING THE AB BACKFILL MATERIAL. COLD MIX ASPHALT MAY BE USED AS AN INTERIM PATCH UNTIL IT IS PRACTICAL TO PLACE PERMANENT THE HOT MIX PATCH.
5. CONTRACTORS SHALL INSTALL ALL FRAMES AND COVERS FOR MANHOLES AND CLEANOUTS TO THE FINISHED GRADE IN ACCORDANCE WITH ND CITY OF SIERRA VISTA STANDARD DETAILS SV420-4 AND SV422, AS APPLICABLE.
6. WHEN TRANSITIONING FROM FOUR-INCH ROLLED CURB TO SIX-INCH VERTICAL CURB, TRANSITION OF THE VERTICAL TWO INCHES MUST OCCUR IN THE VERTICAL CURB SECTION.
7. VALLEY GUTTERS, SPANDRELS, CURB AND GUTTER TO BE CONSTRUCTED PRIOR TO PLACEMENT OF NEW ASPHALT. CONCRETE SHALL BE CURED FOR A PERIOD

OF AT LEAST SEVEN DAYS AFTER PLACING AND SHALL RECEIVE A TACK COAT OF EMULSIFIED ASPHALT CUT BACK WITH 50% WATER PRIOR TO PLACEMENT OF NEW ASPHALT.

8. WHEN THE PAVEMENT SECTION SLOPES AWAY FROM THE GUTTER, THE SLOPE OF THE GUTTER SHALL MATCH THE PAVEMENT CROSS SLOPE, THEREFORE THE GUTTER DEPRESSION IS NOT APPLICABLE.
9. INSTALL SURVEY MONUMENTS PER CITY OF SIERRA VISTA STANDARD DETAIL SV120-1.
10. WHERE SEWER MANHOLES ARE AT STREET INTERSECTIONS, 4 PK NAILS SHALL BE PLACED AROUND MANHOLE TO CREATE AN "X" OUT OF THE MANHOLE IN LIEU OF A SURVEY MONUMENT.
11. ALL CORRUGATED METAL PIPES (CMP'S) AND JOINTS SHALL BE GALVANIZED AND COATED WITH BITUMINOUS COATING PER THE REQUIREMENTS OF MAG STANDARD SPECIFICATIONS SECTIONS 621 AND 760 OR BE ALUMINUM-COATED TYPE-2
12. SIDEWALKS AND HANDICAP RAMPS ARE REQUIRED FOR THE ENTIRE SUBDIVISION AS SHOWN ON THE PLANS. THE INSTALLATION OF SIDEWALKS ALONG THE FRONTS OF INDIVIDUAL LOTS (WHERE DRIVEWAYS CAN POTENTIALLY BE LOCATED) MAY BE POSTPONED FOR A PERIOD NOT TO EXCEED ONE YEAR FROM THE DATE OF CITY ACCEPTANCE OF THE SUBDIVISION. THE INSTALLATION OF ALL HANDICAP RAMPS, AND SIDEWALKS ALONG THE SIDES AND/OR REARS OF LOTS (WHERE DRIVEWAYS WILL NOT BE LOCATED) SHALL BE INSTALLED BEFORE ACCEPTANCE OF THE SUBDIVISION. AT THE END OF ONE YEAR FROM THE DATE OF CITY ACCEPTANCE OF THE SUBDIVISION, SIDEWALKS SHALL BE INSTALLED AT ALL REMAINING AREAS WITHOUT SIDEWALKS. SIDEWALKS AT DRIVEWAYS SHALL BE CONSTRUCTED TO A THICKNESS OF 5 INCHES. FOUR-INCH THICK SIDEWALK MAY BE PLACED ALONG THE FRONT OF A LOT ONLY IF THE LOCATION OF A DRIVEWAY FOR THAT LOT HAS NOT BEEN DETERMINED BY THE END OF ONE YEAR AFTER CITY ACCEPTANCE OF THE SUBDIVISION. **NOTE: CITY ACCEPTANCE OF THE SUBDIVISION WILL COMMENCE WHEN ALL PUBLIC IMPROVEMENTS (INCLUDING SIDEWALKS AND HANDICAP RAMPS ALONG THE SIDES AND/OR REARS OF THE LOTS) ARE COMPLETED. ALL SIDEWALKS SHALL BE COMPLETED ON OR BEFORE ONE YEAR FROM ACCEPTANCE OF THE SUBDIVISION, AT WHICH TIME THE TWO-YEAR WARRANTY PERIOD FOR ALL SIDEWALKS SHALL BEGIN.**

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